

N62578.AR.002831
NCBC DAVISVILLE
5090.3a

NOTES FROM 12 FEBRUARY 2013 BASE REALIGNMENT AND CLOSURE CLEANUP TEAM
MEETING NCBC DAVISVILLE RI
2/12/2013
TETRA TECH

**NOTES FOR THE 12 FEBRUARY 2013 BCT MEETING
FORMER NCBC DAVISVILLE, RHODE ISLAND
QDC CONFERENCE CENTER
95 CRIPE STREET, NORTH KINGSTOWN, RHODE ISLAND**

PARTICIPANTS

David Barney (Navy)	Christine Williams (EPA)
Jeff Dale (Navy) (Phone only)	Rich Gottlieb (RIDEM) (Phone only) ⁽¹⁾
Andrew Glucksman (Mabbett)	Joe Foran (The Management Edge)
Robert Shoemaker (Resolution)	Scott Anderson (Tetra Tech)
Lee Ann Sinagoga (Tetra Tech)	Joe Logan (Tetra Tech) (Phone only)

⁽¹⁾ Mr. Gottlieb attended between 10 AM and Noon. Ms. Joan Taylor, RIDEM, did not attend.

The 12 February 2013 Davisville BRAC Cleanup Team (BCT) meeting began at 10:00 AM and concluded at approximately 4:00 PM. The agenda and sign-in sheet for the teleconference is included as Attachment A of these notes. The following items summarize the meeting discussions and associated decisions and action items:

Collaborative Techniques/Team Building (Joe Foran)

J. Foran talked briefly about partnering, building trust amongst team members, and “Good Process” techniques that result in productive meetings and decision-making for a project. He recommended a clear understanding of each participant’s role on the team and the issues/constraint’s affecting each person (e.g., “checking in” with each team member), adherence to schedule, and an initial review of the agenda to re-prioritize (as necessary) the agenda items. Accordingly, the agenda was reviewed and adjusted to accommodate the fact that R. Gottlieb was only available until noon. A brief discussion of the draft Five-Year Review document occurred. The signing of this document by March 28, 2013 is a top priority for the BCT for February/March 2013. The Navy has received EPA comments on the draft document. R.Gottlieb has not yet reviewed the report; however, he indicated that no real problems/issues are anticipated because the Navy has sampled beyond the breakwater as RIDEM requested. **Post teleconference note:** R. Gottlieb provided comments on the Five-Year Review document on February 19, 2013.

Feasibility Study Addendum (FSA)/Proposed Plan (PP) for Site 16

L. Sinagoga provided and summarized a briefing document for the preferred alternatives for Site 16 groundwater and soil (Attachment B). L. Sinagoga explained that because the

Bldg. E-107 area was very small, the proposed soil alternative would result in the excavation of surface soils (the 0 to 2' interval) at locations in the Bldg. E-107 area with concentrations exceeding RIDEM DEC's for industrial land use *as well as* those locations exceeding RIDEM DEC's for residential land use. R. Gottlieb stated that the marina is open to the public and, thus, RIDEM believes the area is used for "*unrestricted*" recreational purposes. Consequently, remediation to RIDEM residential DEC's would be required for *vadose zone soils (not just surface soils)* in the Bldg. E-107 area, and the PP must clearly specify RIDEM residential DEC's for that area. (Note: The water table in the vicinity of Bldg. E-107 varies with the tides [5 to 10' bgs]). D. Barney explained that, per conversations with J. Taylor (RIDEM), it was the Navy's understanding that excavation of the 0 to 2' interval only was required. Additionally, the Navy does not agree that the Bldg. E-107 marina area should be considered an "unrestricted" recreational area.

R. Gottlieb will discuss the Navy's preferred alternative for soils with J. Taylor and M. Destefano (RIDEM). Excavation to 2' bgs, a soil management plan, and an environmental land use restriction (ELUR) may or may not be acceptable to RIDEM. D. Barney will review this issue again with the Navy's technical team. The team briefly discussed seeking assistance from the Tier II team (i.e., an informal dispute resolution scenario?) in an effort to progress with the PP for Site 16. The Navy is still hoping to finalize a record-of-decision (ROD) for Site 16 in fiscal-year 2013. The reader is referred to the BCT teleconference notes of 14 January 2013 for a more complete discussion of the current Navy and RIDEM positions on this issue.

Action Items:

1. R. Gottlieb will report back to the team regarding the RIDEM position on the Navy's preferred alternative for the soil at Site 16 during the week of February 18th, 2013 (preferably early to mid-week).
2. D. Barney will report back to the BCT once he receives RIDEM response on this issue (hopefully by the end of the week of February 18th, 2013). The FSA/PP is on hold at this time until Action Items 1 and 2 are resolved.
3. Navy to distribute Appendix E of FSA to EPA/RIDEM by 19th February 2013 (Jeff Dale). Please note that the ecological screening levels presented in Appendix E were discussed by Navy, EPA, and RIDEM in 2010. **Post teleconference note:** J. Dale provided Appendix E by email on February 19, 2013.

CED Area Risk Assessment and Path Forward

As noted in the January 2013 teleconference notes and based on the risk assessment prepared by the Navy in 2012, the Navy and EPA generally agree that any unacceptable risks predicted for soils at the CED area could be addressed by institutional controls/ELURs. More specifically, the Navy is proposing no-further-action (NFA) for soils in the Study Area (SA) 01, Site 02, and Site 03, and ELURs for SA 04 (low-level residential land use risks [only] due to polychlorinated biphenyls). Will this be acceptable to RIDEM or must the soil alternatives for SA 04 consider excavation of soils with concentrations exceeding RIDEM industrial DEC's (e.g., the RIDEM Method 1 DEC for industrial soils for lead)? An ELUR is being proposed for SA 04 because the Navy has conducted a risk assessment (RIDEM Method 3) and that assessment does not demonstrate unacceptable risks for the typical industrial worker hypothetically working at SA 04. Note that the Navy has pursued a RIDEM Method 3 risk assessment approach for the CED area soils (not a RIDEM Method 1 or 2 default approach).

The Navy will be submitting responses-to-comments (RTCs) for comments received from EPA/RIDEM on the 2012 CED risk assessment, and is requesting RIDEM input on the Navy's proposal presented in the previous paragraph. The Navy will also address TPH concentrations greater than the RIDEM I/C criterion (2,500 mg/kg) separately from any actions deemed necessary for the CED area under CERCLA. The Navy will also likely prepare an "Early Action Memorandum" to address the contaminated groundwater underlying the CED area.

Action Items:

- 1) RTCs for the EPA/RIDEM comments on the 2012 CED risk assessment will be forwarded to the team no later than February 22nd, 2013. (L. Sinagoga).
- 2) R. Gottlieb will consult with M. Destefano and provide RIDEM input on the Navy proposal for the CED area by February 22nd, 2013.

2013 Five Year Review Report

The Draft Third Five-Year Review Report was distributed on December 28th, 2012. The Navy is currently reviewing comments received from EPA; no comments have been received to date from RIDEM. The Navy requested that the EPA identify their top issues/concerns regarding the draft report:

- The EPA recommended that some of the stronger conclusions regarding contaminant migration (or lack thereof) and the implications of the tidal study results be “dialed back” (made more generalized). While the EPA has concluded that, “The remedy at the OU 1 Allen Harbor Landfill (Site 9) is protective in the long term and the remedy at the OU 8 Calf Pasture Point Solvent Disposal Area (Site 7) is currently protective”, the EPA has not completely digested all of the new information provided by Navy and, thus, may or may not completely agree with all of the more detailed, technical conclusions in the Navy’s draft report (e.g., data use and conclusions drawn from the tidal studies, conclusions regarding the bulk movement/migration of groundwater contaminants at both sites).
- EPA General Comment No. 2 states, “The 1999 OU 8 ROD (Site 7) is not consistent with EPA guidance in that it does not require that groundwater achieve federal drinking water standards.....”. The EPA believes this is a significant “long-term” (not “short term”) issue and recommends that it be resolved through an Explanation of Significant Difference (ESD). (D. Barney indicated that this particular issue may require input from Tier II.)
- EPA General Comments Nos. 3 and 4 request short “Memos to the File” to address EPA issues with the RODs for both OU 2 and OU 4. The recommendations are more about “clarity” (e.g., for future developers); the EPA indicates that these issues do not affect protectiveness.
- “Issues/Recommendations” formally identified in five-year review reports are required to be tracked by EPA. Therefore, the list of “issues/recommendations” identified should reflect those issues (and only those issues) that the Navy/EPA/RIDEM consider significant enough to track (i.e., specifically, the ESD for Site 7). Most issues presented in the draft report will be reduced to “concerns” that reflect a focus or priority to complete rather than remain as an issue that needs to be tracked.
- The ROD for Site 09 “leans on” the current shellfish ban in Allen Harbor. The EPA’s concern is that the Navy cannot enforce the ban. The EPA requests that the Navy calculate the human health risk associated with the chemical concentrations detected in the most recently collected shellfish samples (Fall 2012). Other possible actions to consider are: 1) installation of a fence, 2) additional warning signs (in multiple languages), and 3) more aggressive monitoring of area by local officials. These actions may limit the shell-fishing currently occurring; however, none of these actions would absolutely prevent shell-fishing along the Site 09 shoreline.

- EPA requests a more comprehensive evaluation of the ecological risk associated with the chlorinated volatile organic chemical concentrations (CVOCs) detected in environmental media along the Site 07 shoreline. Screening levels currently presented in the report should be reconciled to the use of one consistent list of levels or at least an explanation of the presentation of more than one set of levels (e.g., screening levels versus the project action limits [PALs]).

Additional notes regarding the Five-Year Review report are as follows:

- The large volume of tables currently presented in the report will be presented in a DVD at the end of the report (hard copies will not be provided in the next version of the report).
- S. Anderson indicated that the Site 07 report distributed on February 12, 2013 (Draft Source Area Investigation and Long-Term Monitoring Data Summary Report) will further support the technical arguments presented in the Draft Five-Year Review report.
- The Navy will provide a technical memorandum interpreting the Site 07 data collected during monitoring event (ME) 40. However, this will be presented independent of the Five-Year Review report.
- C. Williams indicated that EPA Headquarters has accepted the protectiveness conclusions presented in the draft report. She indicated that EPA would need approximately 1 week to review the next version of the report.
- S. Anderson stated that the informal comments sent by EPA by e-mail correspondence have been very useful.
- **Post teleconference note:** R. Gottlieb provided comments on the Five-Year Review document on February 19, 2013.

Action Items:

- 1) The next version of the 2013 Five-Year Review report will likely be published in early March 2013 (S. Anderson).

- 2) C. Williams will conduct formal site walk-over for the Third Five-Year Review on 13th February 2013.
- 3) D. Barney to provide EPA with date of Navy's formal site walk-over for the Third Five-Year Review.

Spring 2013 Long-Term Monitoring Program for Site 09 (ME 41)

The team continued discussions regarding the Spring 2013 round of LTM for Site 09. The Navy's current proposal is being reviewed by EPA/RIDEM. A. Glucksman will provide comments to C. Williams by the 18th February 2013 who will send E-mail correspondence to Navy (J.Dale) (by February 19th) regarding any additions to proposed Spring 2013 monitoring. The EPA recommended sampling at locations 2S and 3D (western side of landfill); the Navy agreed. S. Anderson stated that the 26D location will not be included in the event because the well is "silted in". He also indicated that the Spring 2013 event will not include any locations beyond the breakwater. All sampling of piezometers and sediment will occur from within the created wetland at the "A" locations (nearest the landfill revetment wall).

The Navy anticipates that formal revisions to the Long-Term Monitoring Plan (LTMP) for Site 09 will begin in April 2013. It is anticipated that the BCT will reach consensus on the plan by early August 2013. Barring significant changes in the contaminant profile of environmental media at Site 09, the revised LTMP will establish the monitoring program going forward for Site 09.

Action Items:

- 1) EPA to send comments on Navy's proposal for the Spring 2013 event to J. Dale by February 19, 2013 (C. Williams). **Post teleconference note:** C. Williams provided comments on February 19, 2013.
- 2) D. Barney to send E-mail to R. Gottlieb asking if RIDEM has any comments on the Navy's proposal for the Spring 2013 event. **Post teleconference note:** R. Gottlieb provided concurrence by email on February 14, 2013.

Schedules for All NCBC Davisville Sites

The EPA's current dates for Operable Unit 10 (CED Area Wetlands) are as follows:

- Work Plan – March 29, 2013.
- PP – December 30, 2014.
- ROD – June 30, 2015.
- Remedial Design – June 30, 2016.
- Remedial Action – June 30, 2017.
- Close-out Report – June 30, 2017.

The BCT briefly discussed that funding issues may alter the schedule for OU 10.

The schedules for Site 16 and the CED area are still heavily dependent on resolution of RIDEM comments/issues. For the CED area, it is anticipated that the groundwater will continue to be addressed separately from soils; an Early Action Memorandum will be prepared to address the land/groundwater-use controls and long-term monitoring necessary because of the underlying groundwater contamination. (The EPA recommends examples from Ely/Callahan Mine; the more recent of these is preferred. The Navy may wish to consult with Ed Hathaway, EPA RPM, on this issue.) Per D. Barney, the Early Action Memorandum needs to be prepared in parallel with the Focused Feasibility Study for the CED area soils. The Navy remains hopeful that RODs will be signed for at least one of these sites in 2013. Updated schedules for all NCBC Davisville sites will be an agenda item for the 28th March 2013 BCT meeting.

March 28th BCT/RAB Meeting

The next BCT/RAB meeting will be held on 28th March 2013. The RAB meeting agenda may include: 1) The OU 10 Work Plan, 2) The Third Five-Year Review Report, and 3) Updates for all sites (including path forward for Site 16 and CED area). The BCT agenda will also likely include: 1) Discussions regarding the most recent Site 07 and 09 reports, and 2) The Technical Memorandum for ME 40 (Site 07).

Action Items:

1. Establish agendas by 03.15.13. (J. Dale, L. Sinagoga)
2. Reserve conference rooms at QDC. (D. Barney)
3. Advise Navy of the length of time needed to provide partnering training. (J. Foran)

ATTACHMENT A
AGENDA AND SIGN-IN SHEET
12TH FEBRUARY 2013 BCT TELECONFERENCE



AGENDA
FORMER NCBC DAVISVILLE
BRAC Cleanup Team (BCT) Meeting
(QDC Conference Center, 95 Cripe St, North Kingstown, RI)

Date: February 12, 2013

Time: 10:00 AM to 4:00 PM

- 1) Team Building: Collaborative Techniques (J. Foran) (60 minutes*)
- 2) Feasibility Study Addendum/Proposed Plan for Site 16 (60 minutes*)

Goal: Reach final consensus regarding the preferred alternative for Site 16
Goal: Review changes to Proposed Plan

- 3) Lunch (60 minutes)
- 4) 2013 Five Year Review Report (60 minutes*)

Goal: Reach consensus on primary report conclusions
Goal: Identify any major issues to be resolved to achieve March deadline

- 5) CED Area
- 6) Spring 2013 Long-Term Monitoring Program (Site 09) (30 minutes*)

Goal: Final review/consensus on spring event

- 7) Updated Schedules for All NCBC Davisville Sites (15 minutes*)
- 8) Schedule/Agenda for March 28, 2013 BCT/RAB Meeting (15 minutes*)

* Suggested timeframe for discussion.

ATTACHMENT B
SITE 16 FSA/PP BRIEFING DOCUMENT

NCBC DAVISVILLE SITE 16 FEASIBILITY STUDY ADDENDUM SUMMARY

1.0 INTRODUCTION

1.1 Purpose and Organization of FS Addendum

1.2 Site Background: Refers to Draft Final FS May 2012 for details; includes very brief description and hydrogeological description just to provide frame of reference to reader.

1.3 FS Development: List of versions submitted; notes that there have been discussions between Navy, EPA, and RIDEM to refine the alternatives, but there was no consensus about the alternative to be selected; Based on most recent discussions, alternatives in FSA were developed that are acceptable to the Navy and agencies such that a Proposed Plan and ROD can be prepared and presented.

1.4 List alternatives from 2012 FS: to provide frame of reference to the reader.

2.0 ADDITIONAL RAO

- Groundwater RAO No. 4: Restore groundwater quality to its beneficial use.

3.0 DETAILED ANALYSIS OF THE ADDITIONAL ALTERNATIVES

2.1 New Soil Alternative – S-3A

- Excavation and off-site disposal of surface soils (down to 2 feet) in selected areas in NCA (including the immediate vicinity of marina building) to meet RIDEM Industrial/Commercial direct exposure criteria (DEC).
- Designation of Waste Management Area (WMA) boundary (NCA).
- LUCs for all soils below 2 feet across the NCA (including the immediate vicinity of marina building) including a Soil Management Plan (SMP) for *all* soils below 2 feet across the NCA.
- Five-year reviews.
- Figure showing areas to be excavated.
- ARAR Tables derived from Alternative G-3A.

2.2 New Groundwater Alternative – G-3B

- Injection of chemical oxidant into 12 existing injection wells at eastern end of former Building 41.
- Monitored Natural Attenuation (MNA) for the balance of the plume and the Eastern arm of the plume. Includes WMA considerations.
- Long-term monitoring.
- LUCs (Use restrictions and vapor intrusion control in design and construction).
- Five-year reviews.
- Figure of WMA/1939/plume.

- Figure of injection wells and location of bio-barrier.
- ARAR tables derived from Alternative G-4.
- Contingency remedy - Installation of one bio-barrier to intercept the TCE plume along the downgradient side of the NCA near the Harbor should the plume exceed trigger levels for the protection of Allen Harbor receptors.

4.0 DETAILED ANALYSIS OF COMMON REVISED COMPONENTS

- WMA extending over entire NCA for all groundwater alternatives.
- Soil excavation near marina building to match the description in Alternative S-3A for all soil alternatives.

5.0 COMPARATIVE ANALYSIS

5.1 Comparative Analysis of Soil Alternatives

- Text and table.

5.2 Comparative Analysis of Groundwater Alternatives

- Text and table.

APPENDICES

A Calculations

B Cost Estimates

C Sustainability

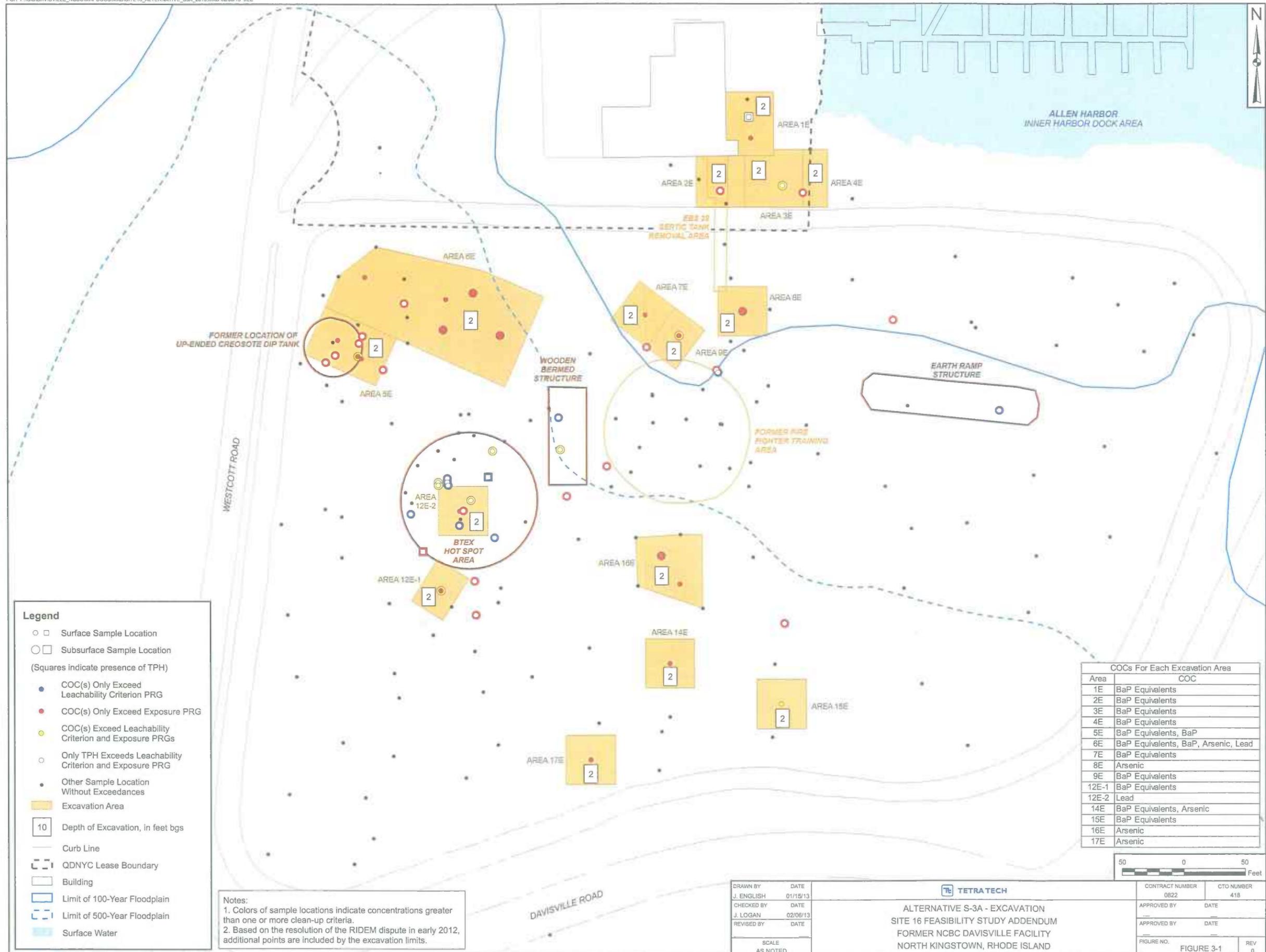
D Groundwater MNA model

E Calculation of ecological trigger concentration

NCBC DAVISVILLE SITE 16 PROPOSED PLAN SUMMARY

The Proposed Plan follows the conventional format. Most of the information in the Proposed Plan is from the RI, FS, and FS Addendum (FSA). Notable changes from the previous version include:

- Addition of Groundwater RAO No. 4: Restore groundwater quality to its beneficial use.
- Addition of Alternatives S-3A and G-3B, per the FSA.
- Identification of Preferred Alternatives as S-3A and G-3B.
- Modifications to Evaluation of Soil Alternatives table and Evaluation of Groundwater Alternatives table per previous comments and the additional alternatives.



Legend

- □ Surface Sample Location
- □ Subsurface Sample Location (Squares indicate presence of TPH)
- COC(s) Only Exceed Leachability Criterion PRG
- COC(s) Only Exceed Exposure PRG
- COC(s) Exceed Leachability Criterion and Exposure PRGs
- Only TPH Exceeds Leachability Criterion and Exposure PRG
- Other Sample Location Without Exceedances
- Excavation Area
- 10 Depth of Excavation, in feet bgs
- Curb Line
- QDNYC Lease Boundary
- Building
- ▭ Limit of 100-Year Floodplain
- ▭ Limit of 500-Year Floodplain
- ▭ Surface Water

Notes:
 1. Colors of sample locations indicate concentrations greater than one or more clean-up criteria.
 2. Based on the resolution of the RIDEM dispute in early 2012, additional points are included by the excavation limits.

COCs For Each Excavation Area	
Area	COC
1E	BaP Equivalents
2E	BaP Equivalents
3E	BaP Equivalents
4E	BaP Equivalents
5E	BaP Equivalents, BaP
6E	BaP Equivalents, BaP, Arsenic, Lead
7E	BaP Equivalents
8E	Arsenic
9E	BaP Equivalents
12E-1	BaP Equivalents
12E-2	Lead
14E	BaP Equivalents, Arsenic
15E	BaP Equivalents
16E	Arsenic
17E	Arsenic



DRAWN BY	DATE
J. ENGLISH	01/15/13
CHECKED BY	DATE
J. LOGAN	02/06/13
REVISED BY	DATE
SCALE	AS NOTED

TETRA TECH

ALTERNATIVE S-3A - EXCAVATION
 SITE 16 FEASIBILITY STUDY ADDENDUM
 FORMER NCBC DAVISVILLE FACILITY
 NORTH KINGSTOWN, RHODE ISLAND

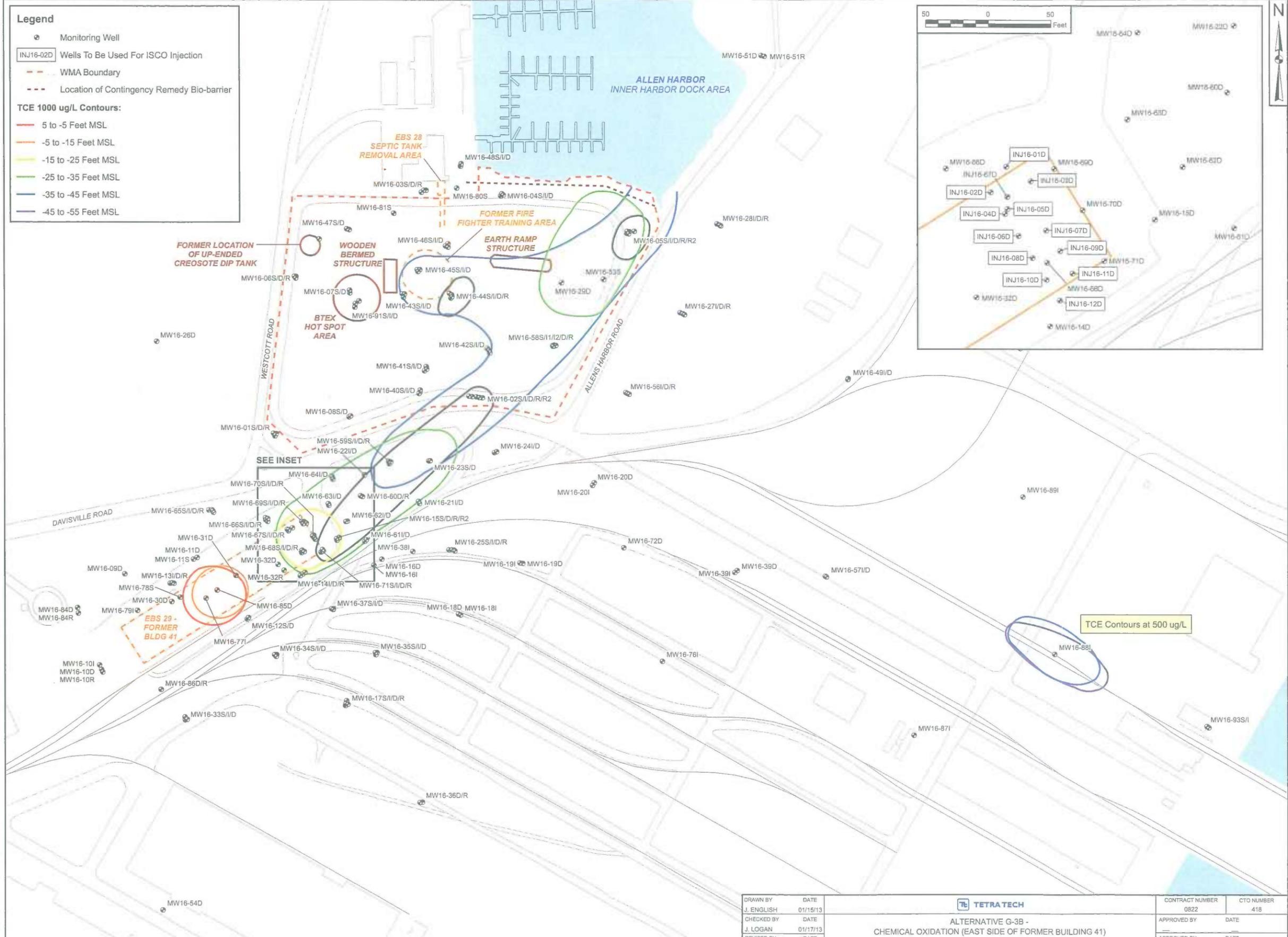
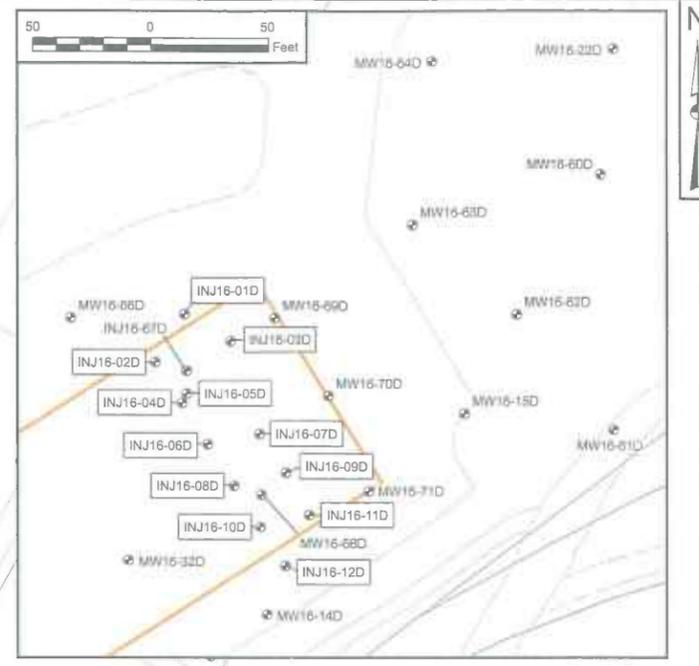
CONTRACT NUMBER	CTO NUMBER
0822	418
APPROVED BY	DATE
APPROVED BY	DATE
FIGURE NO.	REV
FIGURE 3-1	0

Legend

- Monitoring Well
- INJ16-02D Wells To Be Used For ISCO Injection
- - - WMA Boundary
- - - Location of Contingency Remedy Bio-barrier

TCE 1000 ug/L Contours:

- 5 to -5 Feet MSL
- 5 to -15 Feet MSL
- 15 to -25 Feet MSL
- 25 to -35 Feet MSL
- 35 to -45 Feet MSL
- 45 to -55 Feet MSL



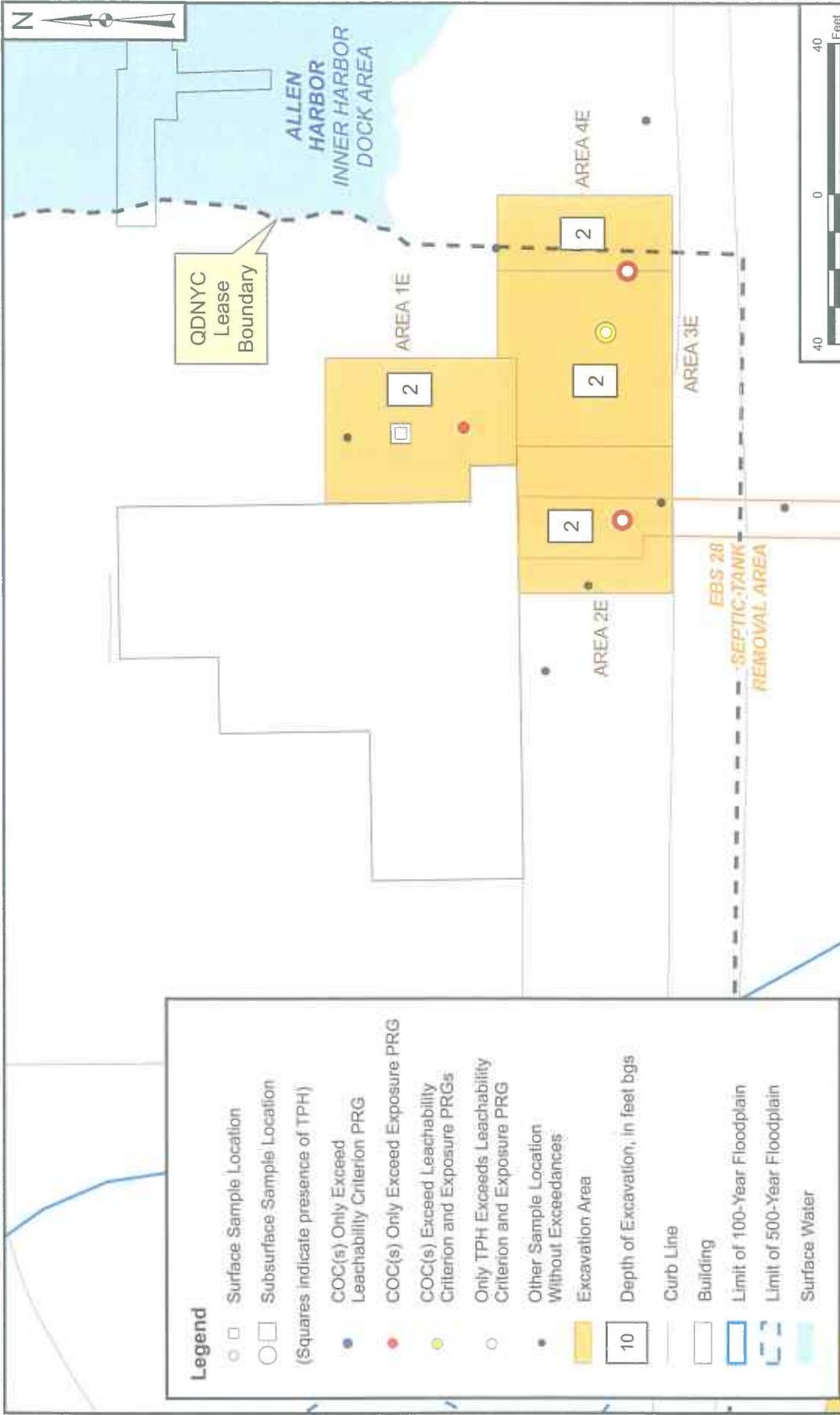
TCE Contours at 500 ug/L

DRAWN BY	DATE
J. ENGLISH	01/15/13
CHECKED BY	DATE
J. LOGAN	01/17/13
REVISED BY	DATE
SCALE	AS NOTED



ALTERNATIVE G-3B -
 CHEMICAL OXIDATION (EAST SIDE OF FORMER BUILDING 41)
 SITE 16 FEASIBILITY STUDY ADDENDUM
 FORMER NCBC DAVISVILLE FACILITY
 NORTH KINGSTOWN, RHODE ISLAND

CONTRACT NUMBER	CTO NUMBER
0822	418
APPROVED BY	DATE
APPROVED BY	DATE
FIGURE NO.	REV
FIGURE 3-3	0



Legend	
	Surface Sample Location
	Subsurface Sample Location
(Squares indicate presence of TPH)	
	COC(s) Only Exceed Leachability Criterion PRG
	COC(s) Only Exceed Exposure PRG
	COC(s) Exceed Leachability Criterion and Exposure PRGs
	Only TPH Exceeds Leachability Criterion and Exposure PRG
	Other Sample Location Without Exceedances
	Excavation Area
	Depth of Excavation, in feet bgs
	Curb Line
	Building
	Limit of 100-Year Floodplain
	Limit of 500-Year Floodplain
	Surface Water

TETRA TECH		CONTRACT NUMBER	0822	CTO NUMBER	
		APPROVED BY		DATE	
QDNYC PARCEL BOUNDARY SITE 16 FEASIBILITY STUDY ADDENDUM FORMER NCBC DAVISVILLE FACILITY NORTH KINGSTOWN, RHODE ISLAND		APPROVED BY		DATE	
		APPROVED BY		DATE	
SCALE	AS NOTED	FIGURE NO.	1	REV	0